

Sgt 7 1. An image recognition device, comprising:

an element matching means to match a plurality of input pattern elements obtained by dividing an input image into a plurality of regions with the corresponding target pattern elements of a target pattern; and

5 a pattern detection means to detect relative positions of said plurality of input pattern elements compared with reference arrangement data of said target pattern elements in order to recognize whether said input image includes said target pattern.

2. An image recognition device, comprising:

10 a dictionary generating unit which stores dictionary data for each pattern element in a target pattern;

an element matching unit, which compares and matches input image pattern data which is provided as input against said dictionary data stored in said dictionary generating unit;

15 an arrangement data generating unit which stores the position data representing the arrangement of the target pattern elements; and

a pattern detection unit, which based on the output of said element matching unit and said position data from said arrangement data generating unit, determines whether said target pattern can be found in said input image pattern data.

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EZP 7 3. The image recognition device of claim 2, wherein said dictionary generating unit comprises a software routine.

4. The image recognition device of claim 2, wherein said element matching unit comprises a software routine.

5. The image recognition device of claim 2, wherein said arrangement data generating unit comprises a software routine.

6. The image recognition device of claim 2, wherein said pattern detection unit comprises a software routine.

10 *7* 7. An image processing device, comprising:

15 an element matching means to match a plurality of input pattern elements obtained by dividing an input image into a plurality of regions with the corresponding target pattern elements of a target pattern;

20 a pattern detection means to detect relative positions of said plurality of input pattern elements compared with a reference arrangement data of said target pattern elements in order to recognize whether said input image includes said target pattern;

and

25 a control means to control output of said input image to an output device when said pattern detection means recognizes said input image includes said target pattern.

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25 *8* 8. The image processing device of claim 7, wherein said output device comprises a printer.

9. The image processing device of claim 7 further comprising a scanner to input said input image into said image processing device.

5 10. The image processing device of claim 7 further comprising a digital camera to input said input image into said image processing device.

11.. The image processing device of claim 7 further comprising a floppy disc to input said input image into said image processing device.

10 12. The image processing device of claim 7 further comprises a personal computer to facilitate copying of said input image.

5 13. A recording medium containing computer code for implementing an image
recognition method, said recording medium comprising:
a storage area having stored thereon a computer code, said computer code
comprising:

an element matching means to match a plurality of input pattern elements obtained by dividing an input image into a plurality of regions with corresponding target pattern elements of a target pattern; and

20 a pattern detection means to detect relative positions of said plurality of input pattern elements compared with a reference arrangement data of said target

pattern elements in order to recognize whether said input image includes said target pattern.

14. A method of processing an image, said method comprising:

5 inputting a reference image;
determining target pattern elements for said reference image by dividing said reference image into a plurality of regions;

10 determining arrangement data for said target pattern elements;
inputting data for an input image;
determining input elements for said input image by dividing said input image into said plurality of regions corresponding to said reference image; and
comparing said target pattern elements and said input elements.

15 15. The method of claim 14, wherein said comparing comprises comparing said target pattern elements and said input elements relative position to each other using said arrangement data.

20 16. The method of claim 14 further comprising halting the process if said target pattern elements include said input elements based on said comparing.

17. The method of claim 14 further comprising changing the color of a reproduction of said input image if said target pattern elements include said input elements based on said comparing.

18. The method of claim 14 further comprising reducing the resolution of a reproduction of said input image if said target pattern elements include said input elements based on said comparing.

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19. The method of claim 14 further comprising superimposing an alphanumeric character on top of a reproduction of said input image if said target pattern elements include said input elements based on said comparing.

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